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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/798,448	03/12/2004	Takeshi Takezawa	119082	5260

25944 7590 02/06/2006

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ALEXANDRIA, VA 22320

EXAMINER
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REHM, ADAM C

ART UNIT	PAPER NUMBER
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2875

DATE MAILED: 02/06/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/798,448	<b>Applicant(s)</b> TAKEZAWA, TAKESHI	
	<b>Examiner</b> Adam C. Rehm	<b>Art Unit</b> 2875	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 03 November 2004.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-24 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 03 November 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \* c) ☐ None of:
- ☒ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>2/3/5, 11/3, 3/25/04</u> . | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Claim Rejections - 35 USC § 102*

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

1. Claims 1, 2, 7, 8, 11-14, 19, 20, 23 and 24 are rejected under 35 U.S.C. 102(b) as being anticipated by SEKI ET AL. (US 6,734,628), which discloses an illumination apparatus (500) for a projector/light modulator (90, Fig. 3) including:

- A light emitting tube, which has a light emitting portion performing light emission between a pair of electrodes (10);
- A sealing portion/electrode shaft located on a front side (20);
- A sealing portion/electrode shaft located on a rear side (20');
- Wherein each sealing portion/electrode shaft conduct heat from electrodes (Column 4, Lines 43-45);
- A first reflector which is arranged on a rear side with respect to the light emitting portion of the light emitting tube (60);
- A second reflector which is a heat-radiation material arranged on a front side with respect to the light emitting portion and attached to the sealing portion located on the front side so that its reflection may surround substantially the front half of said light emitting portion and that a heat capacity/thermal conductivity of the front-side electrode of said pair of

electrodes as is surrounded with said second reflector is made larger than a heat capacity of the rear-side electrode (40, Column 7, Lines 17-40);  
and

- An end part of at least one of said pair of electrodes is held in touch with an inner surface of said light emitting tube (Column 7, Lines 5-7).

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 3-6, 9, 10, 15-18, 21 and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over SEKI ET AL. (US 6,734,628) and KAI ET AL. (US 6,784,601). SEKI discloses an illumination apparatus (500) including:

- A light emitting tube, which has a light emitting portion performing light emission between a pair of electrodes (10);
- A sealing portion located on a front side (20);
- A sealing portion located on a rear side (20');
- A first reflector which is arranged on a rear side with respect to the light emitting portion of the light emitting tube (60);
- A second reflector which is a heat-radiation material arranged on a front side with respect to the light emitting portion and attached to the sealing portion located on the front side so that its reflection may surround

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substantially the front half of said light emitting portion and that a heat capacity/thermal conductivity of the front-side electrode of said pair of electrodes as is surrounded with said second reflector is made larger than a heat capacity of the rear-side electrode (40, Column 7, Lines 17-40); and

- An end part of at least one of said pair of electrodes is held in touch with an inner surface of said light emitting tube (Column 7, Lines 5-7).

3. SEKI does not disclose an electrode shaft that is longer/thicker or has a thicker wall on a front side than a rear-side electrode shaft. However, KAI teaches a front end sealed portion/electrode shaft that is longer than that of the corresponding rear-side portion for the purpose of restricting the temperature on the front side, which is more subject to heat degradation (23, Fig. 1, Column 3, Line 55-Column 4, Line 10 discloses a longer/thicker shaft and corresponding wall in a direction parallel to the shaft length). It would have been obvious to one of ordinary skill in the art at the time of invention to modify SEKI and use the longer/thicker electrode shaft as taught by KAI in order to restrict temperature and likelihood of heat degradation.

### ***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

4. UCHIDA ET AL. (US 6,821,005) discloses an arc bulb having dual reflectors.
5. PITEL ET AL. (US 6,008,568) discloses a heat-sinked lamp assembly.
6. BOUDOURIS (US 3,988,626) discloses a magnetically stabilized arc lamp.

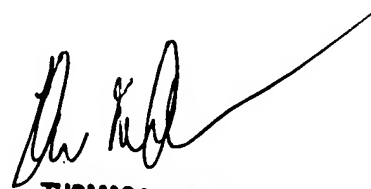
***Correspondence***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Adam C. Rehm whose telephone number is 571.272.8589. The examiner can normally be reached on M-F 9-5:30 EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sandra O'Shea can be reached on 571.272.2378. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

ACR  
2/1/2006



**THOMAS M. SEMBER**  
**PRIMARY EXAMINER**